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ABSTRACT

The effects of small group versus large group instruction in improving the oral language of 40 language delayed preschoolers were examined. Results of scores on the Peabody Picture Vocabulary Test and the Preschool Language Scale indicated that small group instruction appeared to improve the Ss' oral language performance, regardless of sex or age. It also appeared that Ss learned more when instructed in small groups of three or four pupils as compared to large groups of ten students. Findings suggested that teachers and administrators of preschool programs for language delayed children should consider the use of small groups as an effective means of class organization and as a method to enhance language development. (CL)

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Barbara Lowenthal

The Effect Of Small Group Instruction On The
Oral Language Development Of Language-
Delayed Preschool Children

The purpose of this study was to investigate the effects of small group instruction in comparison to large group teaching as an approach to improve the oral language of language-delayed preschoolers. Many early childhood educators have assumed that in order to improve language performance, instruction should be given in small groups with a low pupil-teaching ratio. Dale (1972) stated that a small pupil-teacher ratio may be an important factor in determining the success of a preschool language intervention program. Karnes (1972) emphasized that a low pupil-teacher grouping is a requisite of an early childhood program for language-delayed preschool children as it encourages conversation between the children and their peers as well as with their teachers. Cazden (1972) pointed out that young children who need conversation time with adults should receive it to further their language development; in order to accomplish this, a small pupil-teacher ratio is required.

Although these educators have stressed the need for small group language instruction in preschool intervention programs, there has been little research actually testing this assumption. A review of the limited research available, however, may be

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helpful. Sigel (1972) recommended the use of small group instruction in order to develop the verbal classification skills of economically disadvantaged preschoolers; in his study, small groups of four to six children were instructed daily and made significant gains after a one-month training program. Klaus and Gray (1968), in their description of their Early Training Project for economically disadvantaged children stated that the findings suggested that small group instruction appeared to be a factor in the success of their program which did include language training.

Schmidt (1975) also advised the use of a small pupil-teacher ratio when developing the language skills of preschoolers; in her study, a special time, entitled the Involvement Period, was set aside each day for language instruction in small groups. The experimental subjects made significant gains in receptive and expressive language when compared to the control subjects. Southern and Plant (1972) conducted three experiments which focussed on the effects of structured small group activities on the cognitive and language development of preschool and kindergarten children. Six posttest comparisons significantly favored the experimental groups over the controls. However, more research is needed to better determine the possible advantages of a small pupil-teacher ratio when instructing language-delayed preschool children.

The following questions were proposed as guidelines for this study:

1. Will language-delayed preschoolers, who are instructed

in small groups, realize greater gains in receptive vocabulary than similar children who are taught in large groups, when analyzed by group, age and sex?

2. Will language-delayed preschoolers, who receive small group instruction, realize greater gains in auditory comprehension than similar children who are taught in large groups, when analyzed by group, age, and sex?

3. Will language-delayed preschoolers, who receive small group instruction, realize greater gains in verbal ability than similar children who are taught in large groups when analyzed by group, age, and sex?

4. Will language-delayed preschoolers, who receive small group instruction, realize greater gains in language age scores than similar children who are taught in large groups, when analyzed by group, age, and sex?

Population

Forty language-delayed preschool children, between the ages of 39 to 60 months, were the subjects for this research. These subjects attended the Preschool Program for Language-Delayed Children in School District 21 in Wheeling, Illinois during the 1978-1979 school year. The sample was divided into two large groups of 10 children (L1 and L2) each and six small groups (S1, S2, S3, S4, S5, and S6). There were three children in each of the small groups (S1, S2, S3, S4) and four children in each of the remaining two groups (S5 and S6). The mean initial

intellectual ability, as measured by the Peabody Picture Vocabulary Test (PPVT), Form B (Dunn, 1965), of the large groups was 94.6 I.Q. The mean initial verbal intellectual ability of the small groups, as measured by the PPVT (Form B) was 94 I.Q. The similarities between I.Q. scores occurred by chance.

The mean initial language quotient of the large groups, as measured by the Preschool Language Scale (Zimmerman, Steiner, and Pond, 1969), was 88.65. The mean initial language quotient of the small groups as measured by the Preschool Language Scale (PLS) was 90.35. The similarities between language quotients occurred by chance.

Design

The investigator taught the experimental groups (S1, S2, S3, S4, S5, and S6) and another instructor taught the control groups (L1 and L2). Both the investigator and the instructor had six years of experience in teaching preschool handicapped children as well as superior evaluations by their supervisors. The language instructional time for both the experimental and control groups was limited to 15 minutes for five days a week for the period of the school year between January and June of 1979. During these times, both the investigator and the other instructor taught an eclectic language curriculum. This type of curriculum was chosen in order to determine the effectiveness of small group as compared to large group instruction with pre-school language-delayed children, without regard as to the

curriculum implemented.

To obtain answers to the questions asked in this research, the PPVT, Form B pretest raw scores were compared to the PPVT, Form A posttest raw scores; the PLS pretest auditory comprehension, verbal ability, and language age scores were compared to the PLS posttest auditory comprehension, verbal ability, and language age scores. In order to statistically equate the experimental and control groups on the basis of their pretests, the form of statistical testing for this study was an analysis of covariance. The covariates were the PPVT, Form B, and the PLS subtests. The PPVT, Form A and the PLS posttest scores provided the data for analysis.

The large and small group instruction was analyzed as to its effects on the oral language performance of language-delayed preschoolers. Further analysis was made of differences in the level of language performance as it related to the variables of group, age, and sex. A scattergram analysis was utilized when there was an interaction between age and sex. Significance was established at the .05 level of confidence for all analyses.

Table 1 summarizes the analysis of variance findings for question one. There was a significant difference at the .002 level when the main effect of group size was analyzed. No significant main effects were found for age or sex. None of the interactive analyses was significant. These findings indicate that the experimental or small groups had significantly greater gains in receptive vocabulary than the control or large groups.

Table 1
Analysis of Variance for
PPV Raw Scores

Source of Variation	DF	Sum of Squares	Mean Square	F	Significance
Main Effects					
Group	1	189.721	189.721	11.165	.002
Age	1	0.843	0.843	0.050	NS
Sex	1	14.892	14.892	0.876	NS
Interactions					
Group X Age	1	22.372	22.372	1.317	NS
Group X Sex	1	0.134	0.134	0.008	NS
Age X Sex	1	3.491	3.491	0.205	NS
Group X Age X Sex	1	12.766	12.766	0.751	NS
Explained	8	966.214	124.527	7.328	
Residual	31	526.758	16.992		
Total	39	1522.972	39.951		

Table 2 summarizes the analyses of variance findings for question two. There was a significant difference in PLS auditory comprehension age scores at the .001 level when the main effect of group size was analyzed. No significant main effects were found for age or sex. None of the interactive analyses was significant. These findings also indicate that the experimental subjects had significantly greater gains in auditory comprehension than the control subjects.

Table 3 summarizes the analysis of variance findings for question 3. There was a significant difference in PLS verbal ability age scores at the .038 level when the main effect of group size was analyzed. No significant main effects were found for age or sex. None of the interactive analyses involving group size was significant. These findings indicate that the experimental groups made significantly greater gains in verbal ability than the control groups.

A significant interaction was found between age and sex but not between groups. These differences were analyzed by a scattergram, Figure 1, which summarized the direction of these differences. The results showed that the younger males scored higher than expected. The older females did not score as high as expected in comparison to the younger males.

Table 4 summarizes the analysis of variance findings for question 4. There was a significant difference in PLS language age scores at the .003 level when the main effect of group size was analyzed. No significant main effects were found for age

Table 2
Analysis of Variance for PLS Auditory
Comprehension Age Scores

Source of Variation	DF	Sum of Squares	Mean Square	F	Significance
Main Effects					
Group	1	440.958	440.958	16.004	.001
Age	1	62.465	62.465	2.267	NS
Sex	1	0.166	0.166	0.006	NS
Interactions					
Group X Age	1	2.295	2.295	0.083	NS
Group X Sex	1	18.120	18.120	0.658	NS
Age X Sex	1	3.130	3.130	0.114	NS
Group X Age X Sex	1	82.807	82.807	3.005	NS
Explained	8	1761.606	220.201	7.992	
Residual	31	854.166	27.554		
Total	39	2615.771	67.071		

Table 3
Analysis of Variance for PLS Verbal
Ability Age Scores

Source of Variation	Df	Sum of Squares	Mean Square	F	Significance
Main Effects					
Group	1	98.040	98.040	4.689	.038
Age	1	13.215	13.215	0.632	NS
Sex	1	1.788	1.788	0.086	NS
Interactions					
Group X Age	1	23.262	23.262	1.113	NS
Group X Sex	1	30.528	30.528	1.460	NS
Age X Sex	1	108.901	108.901	5.208	.029
Group X Age X Sex	1	3.764	3.764	0.180	NS
Explained	8	1749.437	218.680	10.459	
Residual	31	648.160	20.908		
Total	39	2397.596	61.477		

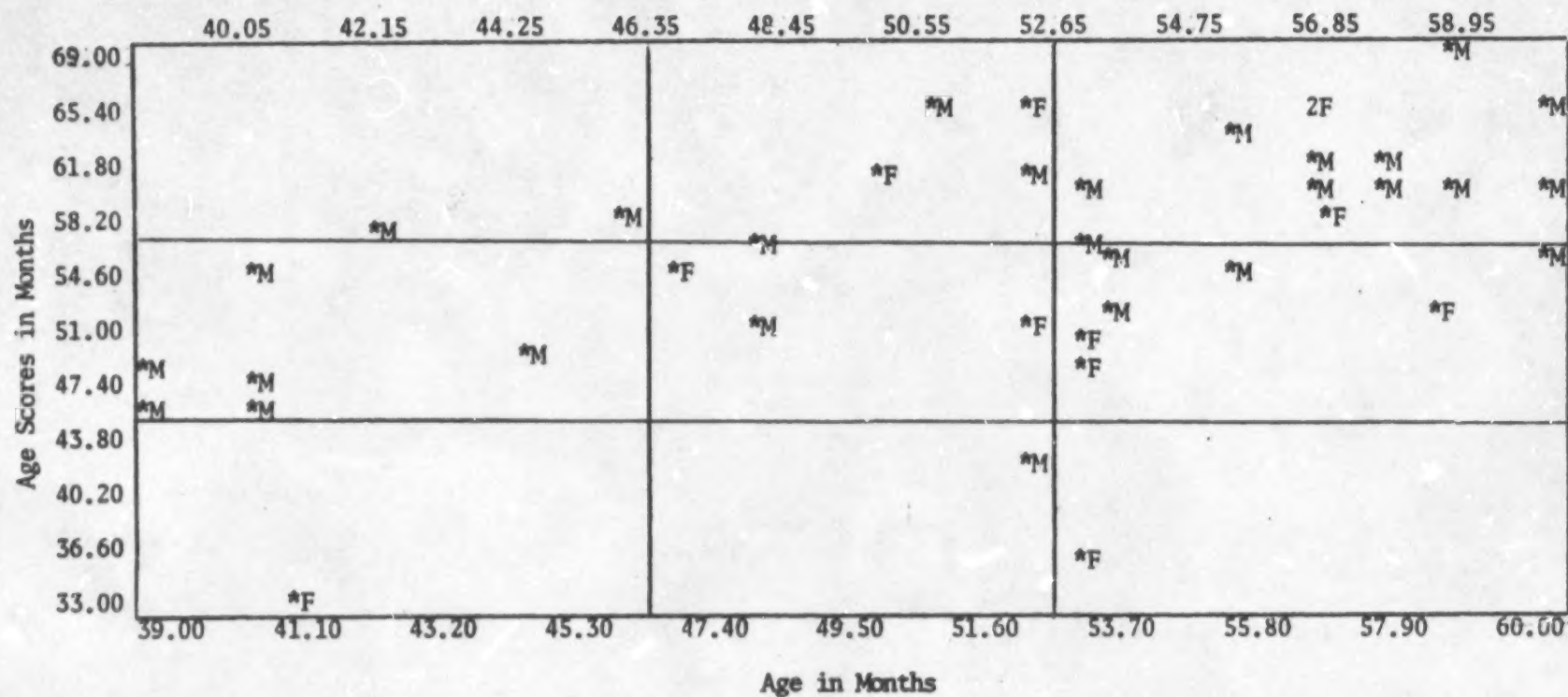


Figure 1. Scattergram of preschool language verbal ability posttest scores with age and sex.

Table 4
Analysis of Variance for PLS
Language Age Scores

Source of Variation	DF	Sum of Squares	Mean Squares	F	Significance
Main Effects					
Group	1	178.385	178.385	10.386	.003
Age	1	15.205	15.205	0.885	NS
Sex	1	9.975	9.975	9.581	NS
Interactions					
Group X Age	1	5.685	5.685	0.331	NS
Group X Sex	1	8.209	8.209	0.478	NS
Age X Sex	1	11.915	11.915	0.694	NS
Group X Age X Sex	1	.622	.622	0.036	NS
Explained	8	1848.514	231.064	13.453	
Residual	31	532.458	17.176		
Total	39	2380.972	61.051		

or sex. None of the interactive analyses was significant. These findings also indicate that the experimental subjects made significantly greater gains in their language age scores than the control subjects.

Discussion

Based on the above analyses, the following conclusions seem appropriate for this study: small group instruction does appear to improve the oral language performance of language-delayed preschool children, regardless of sex or age, within the age group studied. It also appears that young children, between the ages of 39 and 60 months, who have language delays learn more when instructed in small groups of three and four pupils than in large groups of ten students.

In discussing these conclusions, the investigator recognizes that some of the current research on language development in young children is differentiating aural from oral language performance. According to this research, the instruments used in this study, which were the Peabody Picture Vocabulary Test and the Preschool Language Scale, may be measuring the aural aspect of language performance as well as the oral. Perhaps future research will further delineate the two types of language abilities. However, at the present time, the instruments used in this study are recognized and accepted measures of aural-oral language performance.

Another factor recognized by the investigator is that in this study, the same teacher taught all the experimental groups, while the other instructor taught all the control groups. However, both instructors were experienced teachers of preschool language-delayed children. In addition, both instructors held master's degrees with an additional 30 hours of course work in early childhood education. Also, the two teachers had superior evaluations by their supervisors. Thus, the qualifications of the instructor of the experimental groups and the qualifications of the teacher of the control groups appear similar.

In conclusion, an important implication of this study is that teachers and administrators of preschool programs for language-delayed children should consider the use of small groups as a possible effective means of class organization and as a method to enhance language development. Hess and Croft (1972) have issued the following challenge: "One current research problem is to determine what specific experiences influence young children and how the most beneficial of these may be included in programs of early education" (p.29). In answer to this challenge, this investigation points out and suggests the benefits and effectiveness of small group instruction for preschool children with language delays.

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